FSA Integration Partner

United States Department of Education

Federal Student Aid

Data Strategy Enterprise-Wide
Routing ID Team
123.1.24 RID Implementation Options Analysis

Task Order #123

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Executive Summary

Currently, Federal Student Aid (FSA) systems do not share a common trading partner identifier[1]. Historically, new FSA systems have defined unique, application specific identification structures to internally define and manage trading partners. In many cases, these assigned identifiers were unique in nature and inconsistently implemented relative to other applications. As a result, there are frequent inconsistencies with FSA business processes that rely on trading partner related data.

This document analyzes several potential options designed to create a single, unique identifier for all FSA trading partners[2]. The new Routing ID (RID) will provide a single, cross-system, common identifier for every trading partner regardless of trading partner affiliation, ownership structure, or type of interaction with FSA.

The benefits include simplified partner interactions with FSA, streamlined intra-FSA system interactions, enhanced cross-system reporting and analytics capabilities, consistently applied identifier business rules including trading partner relationship management and tracking, and reduced cross-system business processing errors.

Seven potential implementation options for the RID functionality were identified. The seven options as well as a brief description for each can be seen in the following table.
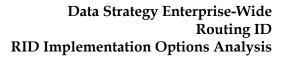
Implementation Option	Description
Common Origination and Disbursement (COD) Based Solution	Build out current COD RID capability for FSA-wide solution.
Stand-alone Solution	Implement RID Solution in a new system outside of any existing system.
Integrated Partner Management (IPM) Based Solution	Implement RID solution as part of larger Integrated Partner Management Solution.
Two Phased IPM Based Solution	Implement RID as a pre-cursor to larger IPM solution.
Stand-alone Enrollment and Access Management Based Solution	Integrate RID Solution into the anticipated Enrollment and Access Management Solution.
Participation Management Based Solution	Integrate the RID Solution into the existing Participation Management system.
Maintain Status Quo	Do not implement an enterprise RID solution.

The seven potential implementation options were then assessed utilizing a set of criteria developed in conjunction with FSA. The individual criteria and a high-level description for each are included in the following table.

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[1] An overview of the current trading partner identifiers maintained within FSA systems is located in Appendix A.

[2] Trading Partners are defined as those entities assisting FSA in the delivery of Title IV aid to eligible recipients. Trading partners include: schools and third party servicers, financial partners (lenders, guarantee agencies, state agencies, etc.) and private collection agencies (PCAs).

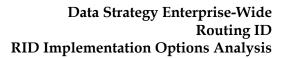| Criteria	Description
Trading Partner Impact	This criterion measures the potential impact to the existing trading partners that interact with the FSA enterprise.
Integration Effort	This criterion measures the enterprise integration effort required to implement and maintain the RID solution.
Cost*	This criterion measures the rough order of magnitude (ROM) estimated to implement the RID solution.
Risk and Complexity*	This criterion measures the overall risk and complexity inherent with the implementation of the RID solution.
Program Goal Achievement	This criterion measures the risk of not meeting the business objectives and overall program goals associated with the RID.

The results of the overall implementation options analysis for are listed in the following table.

Option	Trading Partner Impact	Integration Effort	Cost	Risk and Complexity	Program Goal Achievement	
Weight	1	1	1	2	2	Composite Score
COD Based Solution	3	3	2	1	3	16
Stand-alone Solution	2	1	1	1	2	10
IPM Based Solution	**3**	**2**	**3**	**2**	**3**	**18**
Two Phased IPM Based Solution	3	1	2	1	3	14
Stand-alone Enrollment and Access Management Based Solution	2	1	1	1	1	8
Participation Management Based Solution	2	2	2	1	2	12
Maintain Status Quo	1	1	1*	1*	1	7

Based on these results, the recommendation is to incorporate the RID into the Integrated Partner Management (IPM) Solution. The IPM Solution is envisioned as the future state entry point for new trading partners within FSA's business process life cycle. This option allows the first system in the processing life cycle to capture and maintain the trading partner's RID.

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* Please refer to the detailed evaluation criteria descriptions on page 16 for information on how the Cost and Risk and Complexity criteria were scored for the Maintain Status Quo option.

IPM is currently in the early stages of the visioning and conceptual design. If the IPM concept proceeds forward as part of FSA's future state vision, the recommendation is to incorporate RID within IPM. Under this scenario, IPM can be developed as a new Commercial off the Shelf (COTS) or custom solution or be integrated into an existing solution such as the Common Origination and Disbursement (COD).[3] If the IPM Solution does not move forward as part of the target state vision, a COD Based Solution should be strongly considered for enterprise deployment of RID.

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[3] Additional analysis is required to determine the optimal IPM implementation strategy as part of a broader analysis related to integrated partner management within FSA's future state vision.

Amendment History

DATE	SECTION/ PAGE	DESCRIPTION	REQUESTED BY	MADE BY
7/01/03	All	Document submitted for FSA-wide review	N/A	W. Hoffman

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1 Introduction

1.1 Background

Historically, new FSA systems have defined unique, application specific identification structures to internally define and manage trading partners. Further complicating the landscape, identifiers from bodies outside FSA such as the Data Universal Numbering Scheme (DUNS), Taxpayer Identification Number (TIN), and the Integrated Post Secondary Education Data System (IPEDS) number are used to support specific business process requirements within FSA. This has resulted in a lack of a consistent manner in which to identify trading partners across the FSA enterprise, regardless of system. Instead, trading partners are put in a situation of identifying themselves to FSA using different identifiers depending on the business process or system.

The use of these various identifiers hinders FSA's ability to efficiently gather comprehensive data about trading partners. This may directly affect the decision-making critical to FSA's core mission and may affect FSA's ability to respond quickly to inquiries about trading partners. Further, the multiple manners in which a single entity is identified within FSA business processes is a factor that contributes to data quality issues and potentially reduced customer service levels.

Taking all of this into consideration, there is a strong need for a solution that will create a single, unique identifier for all of FSA trading partners. The key issues driving this need can be summarized as follows:

- Schools and other partners must present different identifiers to FSA depending on type of business transaction.
- Discrepancies exist among identifiers stored within current systems.
- FSA is unable to easily gather information about a school or target group across the enterprise.
- There is no efficient mechanism for creating user defined or "high-level" relationships of trading partners.

To address this need, a new Routing ID (RID) will be implemented. The RID will create a single, cross-system, common identifier for every trading partner regardless of trading partner affiliation, ownership structure, or type of interaction with FSA.

The concept of the RID is not new to FSA. Several years of preliminary thought has been invested into the concept. As a result of this initial work, the RID has already been partially implemented within the Common Origination and Disbursement (COD) system. This RID initiative plans to take the work that was done by COD and raise it to the enterprise level.

When the RID solution is implemented, trading partners will be able to use this new single identifier in place of the myriad of other identifiers they currently use, thereby allowing for

more simplified interactions with FSA. In addition, implementation of the RID will provide FSA with a holistic view of trading partner interactions within the FSA enterprise. This view will enable FSA to oversee, manage, and maintain the various trading partner relationships and reduce cross-system business processing errors.

1.2   *Business Objectives*

The vision of the RID solution is to provide for a consistent manner in which to identify trading partners across the enterprise, regardless of the system, and provide FSA a holistic view of trading partner interactions occurring within the FSA enterprise. This vision was defined by outlining the overall business objectives of the RID solution. The following table identifies the five business objectives that were defined for the RID solution in conjunction with FSA and provides a detailed description for each.

Number	Business Objective	Description
1	Single Common Identifier	Provide FSA trading partners a means to interact with FSA systems and services using a single common identifier across the enterprise, irrespective of the system or function.
2	Enterprise Solution for Management of Partner Identities	Create an enterprise solution for management of partner identifiers by: • leveraging a non-descriptive identifier for each partner; • enhancing the process to create/maintain relationships among partners; • developing the ability to easily segment and report on FSA partners; • and reducing FSA administrative effort required to maintain partner identifiers.
3	Minimize Impact	Minimize impact to established partner interactions by implementing a RID solution that is as transparent to the current trading partner interactions as possible.
4	Gradual Phase-in	Gradually phase-in the RID solution so as not to force partners through an immediate conversion or burden them with additional identifiers.
5	Increase Data Quality	Increase the data quality of information maintained about FSA partners by providing a RID solution that allows for a common enterprise location to store partner relationship information.

Table 1 – RID Business Objectives

The above business objectives were created to provide the high-level direction for the RID solution. For each of the established business objectives there are several corresponding high-level requirements which provide more detail. These high-level requirements were created by pulling information from relevant discussions during previous RID phases, incorporating information gathered during RID Working sessions held during this phase of RID[4], and utilizing information identified by internal team members. The high-level requirements are not detailed requirements or a solution design. These high-level requirements will be further developed and detailed during the ensuing high-level design phase. The following sections illustrate the corresponding relationships between the business objectives and high-level requirements.

1.2.1   Business Objective 1 – "Single Common Identifier"

Identifier/Title:	Single Common Identifier
Description:	Provide FSA trading partners a means to interact with FSA systems and services using a single common identifier across the enterprise, irrespective of the system or function.
High-Level Requirement(s):	RID numbers shall be assigned to trading partner entities based on pre-established business rules.
	The owning business process shall determine the creation of a RID number and the corresponding definition of an "entity[5]."
	The system shall have a given set of standard and custom roles/responsibilities.

Table 2 – Business Objective 1 – "Single Common Identifier"

1.2.2   Business Objective 2 – "Enterprise Solution for Management of Partner Identities"

Identifier/Title:	Enterprise Solution for Management of Partner Identities
Description:	Create an enterprise solution for management of partner identifiers by: • leveraging a non-descriptive identifier for each "partner;" • enhancing the process to create/maintain relationships among partners; • developing the ability to easily segment and report on FSA partners; • and reducing FSA administrative effort required to maintain partner identifiers.

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[4] Copies of the meeting minutes from the RID Working Sessions held to date during this phase are located in Appendix B. The minutes contain specific information on attendees and high-level information on topics discussed.

[5] An "entity" may be a real organization or a virtual construct created solely to facilitate the grouping of RIDs into a user defined group. These "roll-up" entities would permit FSA to easily report and analyze groupings such as all Big 10 schools or all law schools from a particular state.

High-Level Requirement(s):	RID shall be an eight-digit number.
	A RID number will have no inferable meaning, other than in identifying a single entity.
	The RID solution must permit the creation of hierarchical relationships of an indefinite depth.
	The RID solution must permit the creation of multiple relationships for each entity.
	The RID solution must facilitate the creation of user defined relationships among entities including relationships among individual entities and relationships based on shared common entity characteristics.
	The RID solution must permit dynamic views of relationships.
	The RID solution must be able to un-assign, or alter a relationship based on user defined criteria (e.g., Change of Affiliation).
	The RID solution must be capable of reporting trading partner entities based on attributes, relationships, or other properties.
	The RID solution must maintain a history of relationship changes and be capable of identifying relationships at various points in time.
	The RID solution must be integrated with the FSA technical architecture, conform to FSA security standards, and support FSA Security Architecture components such as Access Management.

Table 3 – Business Objective 2 – "Enterprise Solution for Management of Partner Identities"

1.2.3   Business Objective 3 – "Minimize Trading Partner Impact"

Identifier/Title:	Minimize Trading Partner Impact
Description:	Minimize impact to established partner interactions by implementing a RID solution that is as transparent to the current trading partner interactions as possible.
High-Level Requirement(s):	A RID number will remain with an entity permanently, regardless of changes in ownership or organizational structure.
	The RID solution must be capable of storing and maintaining entity attributes (e.g. legacy identifiers, etc.).
	RID numbers are permanent and shall be protected from deletion once assigned.

Table 4 – Business Objective 3 – "Minimize Impact"

1.2.4   Business Objective 4 – "Gradual Phase-in"

Identifier/Title:	Gradual Phase-in
Description:	Gradually phase-in the RID solution so as not to force partners through an immediate conversion or burden them with additional identifiers.

High-Level Requirement(s):	The RID solution shall allow for the integration with existing Legacy systems.
	The RID solution shall be linked to all legacy identifiers to allow for translation between the new identifier and any existing legacy identifier(s) that pertains to that same entity.
	The RID solution will permit the maintenance of highly utilized legacy identifiers, such as the OPE-ID, for an unspecified period so as to enable updates/corrections to be made when necessary.

Table 5 – Business Objective 4 – "Gradual Phase-in"

1.2.5 Business Objective 5 – "Increase Data Quality"

Identifier/Title:	Increase Data Quality
Description:	Increase the data quality of information maintained about FSA partners by providing a RID solution that allows for a common enterprise location to store partner relationship information.
High-Level Requirement(s):	The RID solution must facilitate a consistent view of entities and their relationships across the enterprise.
	The RID solution will use effective dating to allow for an audit trail of changes that might occur to a trading partner.
	The RID solution must maintain the integrity of a relationship between a RID and an entity regardless of changes in attributes or legacy identifiers.
	The RID solution must support ongoing data synchronization and integrity validations.

Table 6 – Business Objective 5 – "Increase Data Quality"

2   Implementation Options

Based on the RID solution vision, business objectives, and high-level requirements, seven potential RID solution implementation options were evaluated. These solution options take into consideration the current FSA technical environment, current and planned integration initiatives, and FSA's enterprise data strategy objectives. The list of potential RID implementation options includes:

- Common Origination and Disbursement (COD) Based Solution
- Stand-alone Solution
- Integrated Partner Management (IPM) Based Solution
- Two Phased IPM Based Solution
- Stand-alone Enrollment and Access Management Based Solution
- Participation Management Based Solution
- Maintain Status Quo

The following sections describe each of these implementation options in detail.

2.1   Common Origination and Disbursement (COD) Based Solution

COD, today in production, manages the current RID creation and maintenance activity for schools. During initial COD design, the COD RID was envisioned as the unique identifier for all schools. Due to legacy application integration, schedule, and budgeting constraints, the COD RID was only partially integrated FSA-wide. This implementation option would expand COD's RID management capabilities and deploy the COD RID enterprise-wide. COD would then have the added responsibility of managing all trading partner identifiers for the enterprise in addition to its current role of origination and disbursement of Title IV funds.

2.2   Stand-alone Solution

In this implementation option, the RID solution would be designed and implemented as a new, distinct, stand-alone system. The new system would interface with existing systems and processes to provide the ownership and regulation of RID across the FSA enterprise.

This Stand-alone Solution would not store or be directly integrated with core partner management data. Instead, it would be tied to such data through a look-up and mapping table likely provided via the Enterprise Application Integration (EAI) Bus. While the actual creation and management of legacy identifiers (e.g., OPE-ID) would remain with the existing corresponding legacy systems, the look-up and mapping table maintained under this solution would provide and index of all of the legacy identifiers and their assigned RID numbers.

2.3   Integrated Partner Management (IPM) Based Solution

The IPM Solution is the future state entry point for new trading partners within FSA's business process life cycle. This option allows the first system in the processing lifecycle to capture and maintain the trading partner's RID. The RID solution would be developed as part of the larger

IPM effort of providing FSA a holistic solution for the oversight, management, and maintenance of trading partners.

2.4   Two Phased IPM Based Solution

This implementation option has an end-state identical to the previous implementation option (i.e., 2.3 Integrated Partner Management (IPM) Based Solution). The distinction is the timing of the solution's implementation. Essentially, this option would implement RID as a Stand-alone Solution while the IPM Solution continues to be defined. The Stand-alone RID Solution would then be integrated with the IPM Solution during its deployment.   As the timeframe for the IPM solution continues to be defined, this implementation option lets the RID solution progress according to its own timetable.

2.5   Stand-alone Enrollment and Access Management Based Solution

RID functionality closely aligns with components of the overall FSA security architecture related to Enrollment and Access Management. Enrollment and Access Management addresses the needs for registering and controlling user access to FSA systems while RID addresses the identification of trading partner entities throughout the FSA enterprise. In this implementation option, the RID Solution would be fully integrated into the enterprise Stand-alone Enrollment and Access Management Based Solution.   This option does not require a broader IPM solution for implementation.

2.6   Participation Management Based Solution

The Participation Management (PM) system currently manages the participation of trading partners in electronic information delivery services provided through the Student Aid Internet Gateway (SAIG). The RID concept of controlling the identification of trading partners is similar to the concept of PM/SAIG controlling the participation in electronic delivery services for the FSA enterprise.

Trading partners currently use PM/SAIG to enroll in multiple electronic services. Upon initial contact with this service, the trading partners are required to identify themselves. They are then assigned an identifier (TG #) with which to conduct future exchanges. In this implementation option, the RID functionality would be fully integrated into the existing PM system and each trading partner would be assigned a RID which would identify them in all future exchanges with the FSA enterprise.

2.7   Maintain Status Quo

As mentioned previously, FSA systems do not currently share a common trading partner identifier. As a result, there are frequent inconsistencies with FSA business processes that rely on trading partner related data. In this option, nothing would be done to create a common trading partner identifier to address the numerous existing inconsistencies with FSA business processes.

3 Evaluation Criteria

During the evaluation phase, advantages, disadvantages, and the overall impact of each option were considered. In addition, a formal set of evaluation criteria was developed in conjunction with FSA to assist in developing an overall assessment for each potential solution.

3.1 Evaluation Criteria Descriptions

The set of criteria identified to evaluate each potential implementation option includes:

- Trading Partner Impact
- Integration Effort
- Cost
- Risk and Complexity
- Program Goal Achievement

The following sections provide a detailed description for each criterion.

3.1.1 Trading Partner Impact

This criterion measures the potential impact to the existing trading partners that interact with the FSA enterprise. Analysis for this criterion included each options need for additional eternal interfaces and its ability to provide streamlined customer support. A major goal driving the need for the RID is that these trading partners are currently overburdened by the numerous existing identifiers with which they must use in identifying themselves to FSA. The RID solution must simplify these interactions while minimizing the impact to the existing trading partners in order to be successful.

Further, trading partners must not be forced to go through an immediate conversion or burdened with maintaining an additional identifier. The implementation of the RID solution must be as transparent to the trading partners as possible.

3.1.2 Integration Effort

This criterion measures the enterprise integration effort required to implement and maintain the RID solution. The FSA enterprise is comprised of a large number of systems each responsible for different functions within the Student Aid Life Cycle. These systems are responsible for interacting with other systems in the life cycle in order to share the data necessary to complete their functions. The RID solution will inherit the same responsibility. It will have to be fully integrated into the FSA technical architecture and adhere to all FSA technology policies and standards in order to be successful. The RID solution will also be responsible for supporting the FSA security and privacy architecture and adhering to all FSA security standards.

In addition, the RID solution will have to be maintained on an ongoing basis. As new functionality is introduced into the FSA enterprise, the RID solution may have to be enhanced in order to continue to effectively interact with the other components of the FSA technical architecture.

3.1.3   Cost

This criterion is a measure of the rough order of magnitude (ROM) estimate to implement the RID solution. The RID solution must be fully integrated with the FSA technical architecture as well as the FSA security and privacy architecture, provide as low a level of risk and complexity to implement as possible, and achieve the business objectives and program goals of FSA in order to be successful. Each of these factors plays a contributing role in determining the ROM for each potential RID solution.

It is important to note that for the Maintain Status Quo option the cost evaluation criterion is not a comparison to implementation cost. Instead, it is a comparison to the cost of the manual effort involved to continue as is. This involves FSA staff members making manual updates to systems whenever needed to correct issues with trading partner identifiers and/or manually gathering information about a particular trading partner or group of trading partners for analysis and reporting purposes.

3.1.4   Risk and Complexity

This criterion is a measure of the overall risk and complexity inherent with the implementation of the RID solution. The RID solution must introduce as little risk and added complexity to the FSA enterprise as possible in order to be successful.

There currently is a fixed commodity of FSA subject matter experts (SMEs) to assist with providing the necessary information for making the RID implementation a success. These SMEs are currently working on a number of efforts across the FSA enterprise. The more risk and complexity involved with the potential RID solution would likely result in more time needing to be invested by these already overburdened SMEs. In addition, the more risk and complexity involved would likely result in a lower possibility that the solution would achieve the business objectives and program goals of the RID.

It is important to note that for the Maintain Status Quo option the risk and complexity evaluation criterion is not a comparison to the risk and complexity that is inherent with any implementation. Instead, it is a comparison to the risk to the integrity of the program if the program should continue as is. As indicated previously, the current use of various identifiers for trading partner identification hinders FSA's ability to efficiently gather comprehensive data about such trading partners. This may directly affect the policy and decision-making critical to FSA's core mission and may affect FSA's ability to respond quickly to inquiries about trading partners. Further, the multiple manners in which a single entity is identified within FSA business processes may contribute to data quality issues and potentially reduced customer service levels.

3.1.5   Program Goal Achievement

This criterion measures the risk of not meeting the business objectives and overall program goals associated with the RID. The overarching business objective of the RID is to provide FSA trading partners a means to interact with FSA systems and services using a single common

identifier across the enterprise, irrespective of the system or function. The RID solution must be able to meet this objective in order to be successful.

In addition, the RID solution must enhance the process to create/maintain relationships among partners, simplify trading partner exchanges, develop the ability to easily segment and report on FSA partners, reduce FSA administrative effort required to maintain partner identifiers, increase data quality on information maintained about FSA trading partners, and provide FSA a holistic view of trading partner interactions.

3.2   Evaluation Criteria Weighting and Ranking

After developing the criteria, each was assigned a weight and scoring scale intended to capture the relative importance of each evaluation category. The criteria weights were baselined with the most important criteria given a weight factor of 2.0. The following table outlines the weights assigned to each criterion as well as a justification for each assignment.

Criteria	Weight	Justification
Trading Partner Impact	1.0	While Trading Partner Impact is an important factor to consider in the over all assessment, the importance of delivering results to FSA's program goals and successfully managing risk and complexity especially as it relates to the utilization of FSA resource capacity were deemed to be slightly more important. In order to make this hierarchy clear, the Trading Partner Impact criterion was given a weight factor of 1.0.
Integration Effort	1.0	While Integration Effort, like Trading Partner Impact, is an important factor to consider in the over all assessment, the importance of delivering results to FSA's program goals and successfully managing risk and complexity especially as it relates to the utilization of FSA resource capacity were deemed to be slightly more important. In order to make this hierarchy clear, the Integration Effort criterion was given a weight factor of 1.0.
Cost	1.0	While Cost, like Trading Partner Impact and Integration Effort, is an important factor to consider in the over all assessment, the importance of delivering results to FSA's program goals and successfully managing risk and complexity especially as it relates to the utilization of FSA resource capacity were deemed to be slightly more important. In order to make this hierarchy clear, the Cost criterion was given a weight factor of 1.0.
Risk and Complexity	2.0	Each option must be evaluated not only on

		their risk assessment of successful integration but also based on their ability to successfully utilize key fixed FSA commodities (budget and FSA subject matter experts). Based on this rationale, the Risk and Complexity criterion was given the highest weight factor of 2.0.
Program Goal Achievement	2.0	If the RID business objectives and program goals cannot be achieved, the initiative should not be undertaken. For this reason, the Program Goal Achievement criterion was given the highest weight factor of 2.0.

Table 7 – Evaluation Criteria Weight Assignment and Justification

It is important to note the natural correlation among the evaluation criteria as it directly impacts the scoring of the solution options. For example, cost has a strong correlation to other criteria as increased risk and complexity, a higher level of integration effort, and complete program goal achievement will more than often result in increased total costs. Trading partner impact is directly affected by the risk and complexity of the solution and the ability of the solution to achieve the program goals of the RID. These correlations were considered in the analysis and are incorporated in the solution option scoring.

The rating scales for all of the criteria ranged from 1 to 3, where higher scores are more favorable. The following table details the weight and corresponding rating scale for each criterion.

Criteria	Weight	Rating Scale (1 – 3)
Trading Partner Impact	1.0	1 [High] 2 [Moderate] 3 [Low]
Integration Effort	1.0	1 [High] 2 [Moderate] 3 [Low]
Cost	1.0	1 [High] 2 [Moderate] 3 [Low]
Risk and Complexity	2.0	1 [High] 2 [Moderate] 3 [Low]
Program Goal Achievement	2.0	1 [High] 2 [Moderate] 3 [Low]

Table 8 – Evaluation Criteria Weighting and Ranking

4   Evaluation

The following sections provide the detailed information related to advantages, disadvantages, assessment based on evaluation criteria and outlook for each potential implementation option.

4.1   *Common Origination and Disbursement (COD) Based Solution*

Successfully deployed as a single origination and disbursement system, COD replaced program-specific origination and disbursement systems such as Recipient Financial Management System (RFMS) for Pell and Direct Loan Origination System (DLOS) for Direct Loan. Today, COD manages the current RID creation and maintenance process for schools. To serve in an enterprise capacity, functional enhancements would be required to extend COD's existing capabilities. These extensions would allow COD to serve as the enterprise-wide owner for all trading partner identifiers.

COD currently maintains three stores of data including student data, schools data, and aid-based transactional data. The current COD RID solution assigns RID identification numbers to schools only. The COD solution would need to be extended to assign identifiers for all trading partners. If the COD Based Implementation option is selected, functionality would also need to be logically added to supplement the schools data store with a complete set of trading partner demographic information. As the new enterprise owner of this data, COD would also need to expand access and distribution of the RID to all FSA systems.

From a technical standpoint, COD currently maintains EAI connectivity with most FSA systems including all key systems which rely on trading partner related data. This infrastructure can be leveraged to deploy an enterprise RID solution. The existing interfaces are primarily batch driven. The integration of a real-time lookup capability would probably be required. This should not be a technical challenge as COD has been foundationally built under a real-time, transaction based model.

4.1.1   Advantages

- COD currently assigns the RID number and has assigned a RID to all school and school related entities.
- The eight digit RID identifier design structure is notionally sound and will be leveraged regardless of the RID implementation solution. Having implemented this design, the COD team has the broadest knowledge base of the solution and associated design.
- COD tracks existing reporting-attending for Pell and DL origination and disbursement, funding relationships for Pell and DL, third party servicer to school relationships, all relationships with effective dating, and change of affiliation relationship changes in the existing system.
- Based on existing touch points with schools, COD may be better positioned to identify and deal with the Change of Affiliation (COA) issues currently occurring. The intimate relationship between RID and COD would ensure that COD could proactively address

such issues in the context of the affect on origination and disbursements. Although there are relatively few (< 60) COAs each year, the cost to FSA, schools, and students is high due to the amount of time spent correcting the issues and waiting for delivery of funds.

- COD has capability to provide real-time assignment; the current constraint is the timing of the PEPS School File feed into COD.
- COD already contains core information about schools such as demographic information, and program eligibility information.

4.1.2 Disadvantages

- The currently implemented COD RID solution is based on current school identifier management business processes. COD, like all FSA systems, will be forced to modify their existing system business logic to accommodate new RID business processes. Changes to the existing system will introduce a potential layer of complexity.
- COD has a number of manual processes related to error correction and identifier relationship management. These processes will need to be extended and automated.
- COD is not currently the centralized source of trading partner related data. COD is not the current lifecycle entry point in the school demographic and relationship management business process.

4.1.3 Option Evaluation

The COD Based Solution received the second highest composite score. This can be primarily attributed to the lower anticipated integration effort associated with RID infrastructure already established in production today. The COD Based solution evaluation is summarized below in the following table.

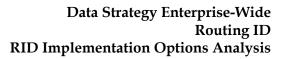| Criteria (Weight)	Rating	Score	Rationale
Trading Partner Impact (1.0)	3 [Low]	3	The impact to trading partners by a COD Based Solution would be low. This is assuming the solution was properly integrated into the life cycle. All Full Participant Schools (i.e. using the Common Record to exchange data) currently utilize the COD RID. As all Pell and/or DL participants are phased into Full Participants, all will be required to utilize the RID regardless.
Integration Effort (1.0)	3 [Low]	3	The integration effort of a COD Based Solution would be low. This is due to the fact that this system is already well established within the FSA enterprise. Key RID mappings are already maintained in core systems including DLSS and FMS. These key

			RID mappings do not exist in several core systems that currently interface with COD, however, including CPS, NSLDS, and SAIG. These mappings would need to be added. Additionally, new interfaces would likely be necessary in a small subset of systems not currently interacting with COD (e.g., eCampus Based) directly. These systems would leverage existing the FSA EAI infrastructure to access COD for managing trading partner identifications and relationships.
Cost (1.0)	2 [Moderate]	2	The cost of a COD Based solution would be moderate. This ranking is primarily driven by the lower level integration effort required balanced against the cost of customization required to deliver the RID functionality.
Risk and Complexity (2.0)	1 [High]	2	The risk and complexity associated with a COD Based Solution would be high. This is driven by impacts that modifications to non-RID related COD functions could have on RID functionality and vice versa.
Program Goal Achievement (2.0)	3 [Low]	6	The risk of not meeting the RID program goals and business objectives associated with a COD Based Solution is low. COD is currently partially meeting the RID business goals and objectives since it is currently assigning RIDs to schools. In order to fully meet the RID objectives and goals, however, functionality would need to be added to enhance the current COD RID assignment process to include the remainder of FSA trading partners.
Composite Score		**16**	

<p align="center">**Table 9 – Common Origination and Disbursement (COD) Based Solution Evaluation**</p>

4.1.4   Assessment

Implementing RID as a COD Based Solution was deemed to have a low amount of impact on trading partners, involve a low level of integration effort, have a moderate cost, have a high amount of inherent implementation risk and complexity, and have a low level of risk of not

achieving the business objectives and program goals of the RID. Taking all of this into consideration, a COD Based Solution is one of the more viable options for implementing an enterprise-wide RID solution.

As mentioned previously, if the IPM solution continues to move forward then COD should be considered as a potential platform for incorporating the RID functionality into the IPM Solution. If, for any reason, the IPM Solution does not continue to move forward, a COD Based Solution should be considered as a strong option for an enterprise-wide RID implementation.

4.2   Stand-alone Solution

Implementing RID as a Stand-alone Solution would have major impacts on the ability to achieve the business objectives and program goals of the RID. This is due to the fact that the Stand-alone Solution would not store or be directly integrated with core partner management data. Instead, it would be tied to such data through a look-up and mapping table likely provided via the Enterprise Application Integration (EAI) Bus. This would add an additional layer to the already complex trading partner environment. Along with this added complexity comes the potential for additional business processing errors or technical breakdowns.

A Stand-alone Solution would enable a significant amount of specialization to be driven into the design. This type of design would be potentially more difficult with solutions where the RID is generated within other existing FSA legacy systems. It is assumed that any specialization driven into the solution would be consistent with overall FSA architecture standards and direction.

Technically, a Stand-alone Solution has the least implications internally to the RID solution. With a blank slate for design, the architecture, tools, and technologies chosen to implement the functionality would only be bound by the requirements. That being said, the solution would require extensive new interface development and a significant level of integration effort to manage the RID movement throughout the FSA enterprise.

4.2.1   Advantages

- Centralizes the management of the RID into a system specifically designated to accommodate it.   This in turn decrease dependencies on other systems to make changes and will limit the amount of internal confusion since there would be a clear line of responsibility for RID generation and maintenance.
- Permits a high degree of flexibility in design, without any constraints imposed by the other systems or functional requirements.
- Provides the best opportunity for all functional requirements specific to RID to be met.

4.2.2   Disadvantages

- Maintains a high level of risk of not meeting the business objectives and program goals of the RID. This is driven by the fact that this type of solution would add an additional layer of complexity to the trading partner environment and thereby increase the risk for business processing errors and technical breakdowns.
- Extensive integration effort required for a new system being introduced into the FSA enterprise. This is especially true since the RID solution would be required to interface with nearly all existing FSA systems.
- Creates redundant stores of some trading partner related data as the creation and maintenance of legacy identifiers (e.g., OPE-ID) would remain in their respective systems.

- Large amount of synchronization would be required with existing legacy systems in the maintenance of the RID to legacy identifiers relationships. This would be attributable to the fact that the Stand-alone Solution would not own the creation or maintenance of legacy identifiers.
- Solution would share parallel process streams through the life cycle as it mirrors legacy systems such as PEPS in the generation of identifiers. For example, PEPS currently assigns the OPE-ID after a newly identified institution answers the first five questions in the eApp process. A RID would also need to be generated at this point.

4.2.3 Option Evaluation

The largest positive factor for a Stand-alone Solution would be the centralization of RID management into a system specifically designated to accommodate it. This centralization of management, however, would come at a price. Primarily in the amount of integration effort required to ensure the solution is properly interfaced with the other FSA systems and processes. The Stand-alone Solution evaluation is summarized below in the following table.

Criteria (Weight)	Rating	Score	Rationale
Trading Partner Impact (1.0)	2 [Moderate]	2	The impact to trading partners of a Stand-alone Solution would be moderate. This type of solution would be implemented in such a way as to be callable by any enterprise process or system within the Student Aid Life Cycle. This being the case, any changes as a result of implementing the RID into the enterprise would be transparent to the trading partners as the trading partners would continue to interact with the same enterprise process or system that they currently do.
Integration Effort (1.0)	1 [High]	1	The integration effort of a Stand-alone Solution would be high. This is directly tied to the fact that the new stand-alone system would require new interfaces to promulgate RIDs across almost all existing FSA systems.
Cost (1.0)	1 [High]	1	The cost of a Stand-alone Solution would be high. This is driven by the fact that as a stand-alone system it would require a large amount of integration in order to incorporate it into the FSA enterprise. In addition to this, there would be base costs related to the creation of an entirely new system as well as ongoing costs

			for maintaining the system.
Risk and Complexity (2.0)	1 [High]	2	The risk and complexity associated with a Stand-alone Solution would be high. This is directly related to the high level of integration required to incorporate the solution into the enterprise. With the increased amount of integration required, the risk of process or technical breakdowns would increase.
Program Goal Achievement (2.0)	2 [Moderate]	4	The risk of not meeting the RID program goals and business objectives associated with a Stand-alone Solution is moderate. This is due to the fact that this type of solution would add an additional layer of complexity to the trading partner environment and thereby increase the risk for business processing errors and technical breakdowns. Balancing this is the solutions ability to meet the functional requirements of the RID due to lack of other legacy system constraints.
Composite Score		**10**	

Table 10 – Stand-alone Solution Evaluation

4.2.4   Assessment

Implementing RID as a Stand-alone Solution was deemed to have a moderate amount of impact on trading partners, involve a high level of integration effort, have a high cost, have a high amount of inherent risk and complexity, and have a moderate level of risk of not meeting the business objectives and program goals of the RID. Taking all of this into consideration, implementing an Stand-alone Solution was not determined to be a very viable option for implementing an enterprise-wide RID solution.

4.3 Integrated Partner Management (IPM) Based Solution

Incorporating the RID into the IPM Solution is a functionally sound implementation option. FSA needs the ability to keep pace with the trading partner environment as it grows more and more complex. There are increasing numbers of multi-layered corporations that buy and sell postsecondary schools or parts of schools and university systems that combine the centralized processing of one Title IV program with the distributed processing of another. FSA needs a clear view of Title IV related activity at the trading partner level and this is precisely what RID as a portion of the larger IPM effort would provide.

An IPM Based Solution would be designed specifically to manage the key trading partner interactions and information. This solution would potentially absorb functionalities from existing legacy systems and also add new functionalities that were previously unavailable. This would provide a clear demarcation of the system's responsibilities within the enterprise and prevent potential conflicts that might exist with a Stand-alone Solution.

The IPM Based Solution was deemed to have a lower level of risk associated with it than any of the other implementation options. This can be attributed to the fact that the target solution would be designed holistically. This helps to mitigate integration risks. In addition, an integrated solution would incorporate the necessary processes to ensure trading partners are properly identified at the earliest point in their FSA interaction.

An integrated IPM Based Solution would provide for tighter integration of data between the all the business processes included therein. From a technical perspective, this increased integration would allow for leveraging of the same source data in a real-time mode without potential data errors arising from latency or interface issues. The result would be increased data quality in the RID source system and decreased ongoing maintenance costs.

4.3.1 Advantages

- RID is a part of an integrated system designed to manage all trading partner interaction with FSA.
- Maximizes the synergies of the RID and IPM business objectives thereby increasing the efficiency and effectiveness of FSA trading partner relationships.
- Allows the RID to be assigned as new trading partner entities are identified to the enterprise and approved.
- Minimizes potential synchronization issues arising from the RID and other legacy identifiers being managed by separate systems.

4.3.2 Disadvantages

- Requires coordination with vision and timing of larger IPM Solution, which is only in the early stages of the visioning and conceptual design process.

- Waiting for IPM Solution implementation to deploy RID functionality may result in a delay of the RID solution benefits to FSA and its trading partners.
- Significant amount of effort is required for the IPM Solution to be fully deployed. The effort would involve potential changes to several legacy systems and touch major critical processes in the delivery and oversight of Title IV funds. This increases the risk of business processing errors that could impact customer service levels.

4.3.3 Option Evaluation

The inclusion of the RID solution within the larger IPM Solution scored well on several of the evaluation criteria. Because the solution would be integrated from the start with other trading partner management processes, this solution's overall risk of not meeting the program goals and objectives scored very low. The synergies of combining RID within the larger IPM Solution would also translate into a moderate level of implementation risk and complexity and low level of impact to trading partners. The IPM Based Solution evaluation is summarized below in the following table.

Criteria (Weight)	Rating	Score	Rationale
Trading Partner Impact (1.0)	3 [Low]	3	The impact to trading partners by an IPM Based Solution would be low. The IPM Based Solution would address many of the issues currently faced by trading partners in conducting business with FSA. The implementation of the IPM Based Solution would have significant positive effects on trading partners while not having a visible impact on their day to day interactions within the FSA enterprise.
Integration Effort (1.0)	2 [Moderate]	2	The integration effort of an IPM Based Solution would be moderate. This is due to the fact that the RID solution would not be considered in isolation but rather as a part of the larger solution for the oversight, maintenance and management of trading partners. This being the case, integration efforts would be consolidated and the potential for duplication limited.
Cost (1.0)	3 [Low]	3	The cost of an IPM Based Solution would be low. The synergies in combining the RID solution with the IPM solution would help spread the costs over a larger effort thereby driving the marginal cost of the RID solution downward.

Risk and Complexity (2.0)	2 [Moderate]	4	The risk and complexity associated with an IPM Based Solution would be moderate. This is driven by the fact that the target solution would be designed holistically thereby mitigating potential integration risks and/or duplications. Balancing this is the fact that the IPM Solution is in the early stages of visioning and conceptual design.
Program Goal Achievement (2.0)	3 [Low]	6	The risk of not meeting the RID program goals and business objectives associated with an IPM Based Solution is extremely low. The intent of the IPM Solution is to provide FSA a holistic solution for the oversight, management, and maintenance of trading partners. This being the case, incorporating the RID functionality into this solution offers the greatest chance for all of the business objectives and program goals of the RID to be achieved.
Composite Score		**18**	

Table 11 – Integrated Partner Management (IPM) Based Solution Evaluation

4.3.4 Assessment

Implementing RID as an IPM Based Solution was deemed to have a low amount of impact on trading partners, involve a moderate level of integration effort, have a low cost, have a moderate amount of inherent risk and complexity, and have a low level of risk of not meeting the business objectives and program goals of the RID. Taking all of this into consideration, incorporating the RID functionality into the IPM Solution was determined to be the most viable option for implementing an enterprise-wide RID solution.

As previously mentioned, if the IPM Solution continues to move forward then COD should be considered as a potential platform for incorporating the RID functionality into the IPM Solution. If, for any reason, the IPM Solution does not continue to move forward, a COD Based Solution should be considered as a strong option for an enterprise-wide RID implementation.

4.4   Two Phased IPM Based Solution

This solution has the same functional benefits as the IPM Based Solution. The Two Phased IPM Based Solution has the potential for a more accelerated solution development and deployment timeframe than the IPM Based Solution, however. This would result in the accelerating the benefits associated with RID to FSA and its trading partners.

The complexity inherent with implementing the RID solution as a pre-cursor to the IPM solution, rather than in conjunction with it, is that this option requires careful planning to ensure that the intermediary RID solution is consistent with the overall vision for IPM.

The RID solution would establish basic business rules that would have to then be absorbed into the IPM Based Solution. These business rules would need to be implemented in a manner that permits easy transferability to a potentially new platform or architecture. This could potentially limit the technical design possibilities for the intermediary RID solution.

4.4.1   Advantages

- Allows for potentially accelerated benefits associated with implementing RID to FSA and its trading partners.
- Places RID within a solution intended to manage the majority of trading partner information.
- Maximizes the synergies of the RID and IPM business objectives thereby increasing the efficiency and effectiveness of FSA trading partner relationships.
- Allows the RID to be assigned as new trading partner entities are deemed eligible.
- Minimizes potential synchronization issues arising from the RID and other legacy identifiers being managed by separate systems.
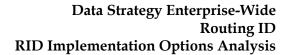
4.4.2   Disadvantages

- Requires coordination with vision and timing of larger IPM Solution, which is only in the early stages of the visioning and conceptual design process.
- Risk of RID solution not integrating properly into long-term IPM solution.
- Potential additional cost and effort to integrate solutions at a later point. It may be difficult to integrate with commercial off-the-shelf (COTS) packages that may be used as a part of the larger IPM solution.

4.4.3   Option Evaluation

Despite having the same end-state vision as the IPM Based Solution, the multiple phases involved in getting there caused this option to score lower in all categories except for impact to trading partners and program goal achievement. The Two Phased IPM Based Solution evaluation is summarized below in the following table.

Criteria (Weight)	Rating	Score	Rationale
Trading Partner Impact (1.0)	3 [Low]	3	The impact to trading partners by a Two Phased IPM Based Solution would be low. The Two Phased IPM Based Solution would address many of the issues currently faced by trading partners in conducting business with FSA. The implementation of the Two Phased IPM Based Solution would have significant positive effects on trading partners while not having a visible impact on their day to day interactions within the FSA enterprise.
Integration Effort (1.0)	1 [High]	1	The integration effort of a Two Phased IPM Based Solution would be high. This is due to the potential complexity of phasing the RID into FSA in two waves. The RID functionality would first be implemented as a stand-alone component. This stand-alone component would then have to be integrated into the IPM Solution at the time of its deployment.
Cost (1.0)	2 [Moderate]	2	The cost of a Two Phased IPM Based Solution would be moderate. This is primarily driven by the high level of integration effort required balanced against the synergies obtained with the larger IPM effort.
Risk and Complexity (2.0)	1 [High]	2	The risk and complexity associated with a Two Phased IPM Based Solution would be high. This is as a result of the two transition phases required: one during initial stand-alone solution implementation and the second during the integration.
Program Goal Achievement (2.0)	3 [Low]	6	The risk of not meeting the RID program goals and business objectives associated with a Two Phased IPM Based Solution is extremely low. Given that the end state of this solution is identical to the option of the IPM Based Solution, the ability for this solution to achieve the business objectives and program

			goals of the RID is identical.
Composite Score		**14**	

Table 12 – Two Phased IPM Based Solution Evaluation

4.4.4   Assessment

Implementing RID as a Two Phased IPM Based Solution was deemed have a low amount of impact on trading partners, involve a high level of integration effort, to have a moderate cost, have a high amount of inherent risk and complexity, and have a low level of risk of not meeting the business objectives and program goals of the RID. Taking all of this into consideration, the Two Phased IPM Solution was determined to be a somewhat viable option for implementing an enterprise-wide RID solution.

4.5   Stand-alone Enrollment and Access Management Based Solution

The Enrollment and Access Management and RID solutions fulfill distinct, yet complementary functions. By associating the Enrollment and Access Management and RID functions, Enrollment and Access Management would benefit from the integration of receiving information about external entity identifiers. Similarly, RID would support controlling the delegated administration functions of Access Management by providing information related to trading partner user associations. The complex relationships that may be maintained through RID functionality would be transparent and fully incorporated within the Stand-alone Enrollment and Access Management Based Solution.

Despite the complementary nature of RID and Enrollment and Access Management functionalities, they are nonetheless distinct. The Enrollment and Access Management Solution would require extensive breadth to support the specialized functions and requirements associated with the RID. This being the case, extensive customization of the Stand-alone Enrollment Access Management Based Solution would likely be required in order to meet the combined RID and Enrollment and Access Management needs of the FSA enterprise.

4.5.1   Advantages

- Provides tighter integration between the access management security and the trading partner identifier solutions. This would facilitate better relationship management of individual users to their organizations, and between organizations and provide additional information on how trading partners are interacting with FSA.
- Enrollment and Access Management Solution may provide a base for a portion of the RID solution (e.g., by the possible selection of commercially available products).

4.5.2   Disadvantages

- Solution would require synchronization to other legacy systems maintaining other identifiers (e.g., PEPS updates for change of affiliation, school reapplications, etc. There are estimated to be 50-60 changes of affiliations a year. Schools must also reapply every 4-6 years).
- Access Management tools are specialized to perform access management functions rather than general trading partner management functions. This would require either significant customization for accommodating the RID functionality or the build out of an essentially separate subsystem that would negate several of the benefits. Further, significant customizations of a Stand-alone Enrollment and Access Management Solution would significantly increase ongoing costs.

4.5.3   Option Evaluation

The Stand-alone Enrollment and Access Management Based Solution was seen as having a moderate impact to trading partners. While this solution scored fairly well in this area, it did

not score very well on the remaining evaluation criteria. The Stand-alone Enrollment and Access Management Based Solution evaluation is summarized below in the following table.

Criteria (Weight)	Rating	Score	Rationale
Trading Partner Impact (1.0)	2 [Moderate]	2	The impact to trading partners by a Stand-alone Enrollment and Access Management Based Solution would be moderate. This type of solution would be implemented in such a way as to be callable by any enterprise process or system within the Student Aid Life Cycle. This being the case, any changes as a result of implementing the RID into the enterprise would be transparent to the trading partners as the trading partners would continue to interact with the same enterprise process or system that they currently do.
Integration Effort (1.0)	1 [High]	1	The integration effort of a Stand-alone Enrollment and Access Management Based Solution would be high. This is primarily due to the fact that Access Management tools are generally specialized toolsets, either as custom developed or as commercially available products. This being the case, a significant amount of integration and customization would be necessary in order to incorporate the RID functionality into this solution.
Cost (1.0)	1 [High]	1	The cost of a Stand-alone Enrollment and Access Management Based Solution would be high. This is directly a result of the above stated customization and integration effort required to incorporate the RID functionality into the solution.
Risk and Complexity (2.0)	1 [High]	2	The risk and complexity associated with a Stand-alone Enrollment and Access Management Based Solution would be high. This is primarily driven by the notion that as an integrated solution, modifications to one aspect of functionality may directly impact the other.
Program Goal Achievement (2.0)	1 [High]	2	The risk of not meeting the RID program goals and business

			objectives associated with a Stand-alone Enrollment and Access Management Based Solution is high. This is directly related to the additional layer of complexity it potentially adds to the trading partner environment. This solution would not directly store the core partner management data, but rater access it via a look-up or mapping table. This would result in an increased risk for business processing errors and technical breakdowns.
Composite Score		8	

Table 13 – Stand-alone Enrollment and Access Management Based Solution Evaluation

4.5.4   Assessment

Implementing RID as a Stand-alone Enrollment and Access Management Based Solution was deemed to have a moderate amount of impact on trading partners, involve a high level of integration effort, have a high cost, have a high amount of inherent risk and complexity, and have a high risk of not meeting the business objectives and program goals of the RID. Taking all of this into consideration, incorporating the RID functionality into a Stand-alone Enrollment and Access Management Based Solution was not determined to be a very viable option for implementing an enterprise-wide RID solution.

The Stand-alone Enrollment and Access Management Based Solution should only be considered if the IPM Solution does not continue to move forward. If the IPM Solution does continue to move forward then, both the Enrollment and Access Management functionality and the RID functionality should be integrated into it.

4.6   Participation Management Based Solution

Participation Management/SAIG manages trading partner participation in electronic delivery services for the FSA enterprise. The intent of RID would be to control the enterprise identification of all trading partner entities. While seemingly similar roles, the distinction between RID and PM/SAIG is scope.

For PM, a TG Number is the identifier used by institutions when exchanging electronic information with FSA systems via the SAIG mailbox. The RID, however, would be the trading partner's enterprise with FSA, not just the specific system's services. As such, the scope of a RID solution is greater than that currently provided by the PM application.

Technically, in this solution the RID would need to conform to the technical architecture and design of the PM/SAIG legacy system, thus limiting the solution's ability to best meet the functional requirements.

4.6.1   Advantages

- PM currently interacts with a majority of the existing trading partners. In addition, PM currently provides a nightly participants file to several of the FSA systems.
- Participation Management currently manages some of the key trading partner attributes that a RID solution would also maintain. These attributes include the programs and services in which a trading partner is currently participating.
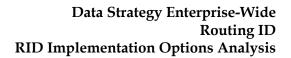
4.6.2   Disadvantages

- The PM system does not currently interact at the appropriate life cycle process points for an enterprise RID solution. The implementation of RID within PM may potentially cause inconsistencies in process/system interactions.
- A PM Based Solution would require significant synchronization effort in its interaction with other FSA systems that own and maintain identifiers.
- Potential technology constraints on solution design/implementation due to RID having to conform to the technical architecture and design of the PM/SAIG legacy system.
- Not all current processes/systems utilize PM/SAIG. Thus the scope of the PM system would have to change to become the FSA solution for trading partner identifiers.

4.6.3   Option Evaluation

The PM Based Solution was determined to have a high level of inherent risk and complexity. This is primarily driven by the fact that modifications to non-RID PM functionality may pose risks to RID functionality and visa-versa. While the PM Based Solution scored poorly in regards to inherent risk and complexity, it scored moderately in all other categories. The PM Based Solution evaluation is summarized below in the following table.

Criteria (Weight)	Rating	Score	Rationale
Trading Partner Impact (1.0)	2 [Moderate]	2	The impact to trading partners by a PM Based Solution would be moderate. Since the majority of trading partners already use the PM/SAIG for electronic delivery services offered by FSA, adding the RID functionality to this process would require little additional action by these partners. Conversely, this type of solution, would potentially add an additional layer of complexity to the trading partner environment since it would not directly store the core partner management data but rater access it via a look-up or mapping table. This would result in an increased risk for business processing errors and technical breakdowns.
Integration Effort (1.0)	2 [Moderate]	2	The integration effort of a PM Based Solution would be moderate. This is a result of the fact that the existing system would have to accommodate additional functionality required by the RID balanced against the existing amount of integration PM has within the enterprise.
Cost (1.0)	2 [Moderate]	2	The cost of a PM Based solution would be moderate. The cost for this implementation option is primarily driven by the moderate integration effort required.
Risk and Complexity (2.0)	1 [High]	2	The risk and complexity associated with a PM Based Solution would be high. This is driven by impacts that modifications to non-RID related PM functions could have on RID functionality, and vice versa.
Program Goal Achievement (2.0)	2 [Moderate]	4	The risk of not meeting the RID program goals and business objectives associated with a PM Based Solution is relatively moderate. Although well integrated with the enterprise, the PM Based Solution would require significant customization thus driving up the risk and complexity of the solution and increasing the chance for

			business processing errors and technical breakdowns.
Composite Score		**12**	

Table 14 – Participation Management Based Solution Evaluation

4.6.4   Assessment

Implementing RID as a PM Based Solution was deemed to have a moderate amount of impact on trading partners, involve a moderate level of integration effort, have a moderate cost, have a high level of inherent risk and complexity, and have a moderate level of risk of not achieving the business objectives and program goals of the RID. Taking all of this into consideration, the PM Based Solution was determined not to be one of the more viable options for implementing an enterprise-wide RID solution.

4.7   *Maintain Status Quo*

If the RID functionality is not implemented, FSA will be left with its current environment in which there are a multitude of identifiers for each of its trading partners and frequent inconsistencies in business processes that rely on trading partner data. Additionally, FSA would never realize the potential benefits associated with the RID functionality including simplified partner interactions with FSA, streamlined intra-FSA system interactions, enhanced cross-system reporting and analytics capabilities, consistently applied identifier business rules including trading partner relationship management and tracking, and reduced cross-system business processing errors.

4.7.1   Advantages

- Minimal upfront cost to FSA since no solution will be designed or implemented.
- Existing technologies and processes would remain in place without disruption.
- Trading partners will be able to maintain current business processes when interacting with FSA and no additional effort will be required on their part.
- Current set of identifiers can continue to be utilized by both trading partners and FSA.
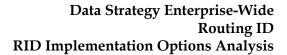
4.7.2   Disadvantages

- Continued difficulty in identifying trading partners in a consistent manner across the enterprise. Maintaining the status quo would perpetuate the identifier confusion within FSA and trading partners for an indefinite time frame.
- Continued lack of cohesiveness between systems in identifying and reconciling trading partner information.
- Continued lack of effective roll-up reporting capabilities.
- Continued inability to create user-defined trading partner relationships.
- Trading partners would continue to maintain multiple identifiers and experience the problems associated with them when a change of affiliation occurs.
- Large direct and indirect costs associated with inaction including continued manual effort to resolve identifier discrepancies and accumulate information needed for analysis and reporting purposes.

4.7.3   Option Evaluation

Although doing nothing is always an option, maintaining the status quo would do little to meet the business objectives and program goals outlined for the RID solution. FSA would continue to deal with issues such as multiple identifiers for the same trading partner, impacts of relationship changes to the delivery of Title IV funds, and the lack of comprehensive reporting across trading partner activities. This evaluation is summarized below in the following table.

Criteria (Weight)	Rating	Score	Rationale
Trading Partner Impact (1.0)	1 [High]	1	The impact to trading partners by Maintaining the Status Quo would be

			extremely high. Trading partners would receive no benefit from maintaining the status quo. Instead, they would continue to experience the current issues such as maintaining multiple identifiers and dealing with impacts from events such as change of affiliation.
Integration Effort (1.0)	1 [High]	1	The integration effort of Maintaining the Status Quo would be extremely high. While Maintaining the Status Quo would not require any integration effort associated with an implementation, the significant amount of manual integration required among the current systems would remain. This ongoing integration effort was deemed as more significant than the integration effort that would be required by a new solution.
Cost (1.0)	1 [High]	1	The cost of Maintaining the Status Quo would be extremely high. The cost of Maintaining the Status Quo would be minimal in terms of actually delivering a solution since one would not be delivered. However, without a new solution to ease the manual efforts involved in addressing issues such as changes of affiliation, trading partner confusion over identifiers, and the creation of reports, FSA would continue to experience these real costs.
Risk and Complexity (2.0)	1 [High]	2	The risk and complexity associated with Maintaining the Status Quo would be extremely high. This risk and complexity is not a comparison to the risk and complexity that is inherent with any implementation. Instead, it is a comparison to the risk to the integrity of the program if the program should continue as is. Without an implementation of the RID functionality the current existing issues would remain and continue to disrupt the delivery and oversight of Title IV aid.
Program Goal	1 [High]	2	The risk of not meeting the RID

Achievement (2.0)			program goals and business objectives associated with Maintaining the Status Quo would be extremely high. If the RID functionality is implemented then the program goals and business objectives will never be achieved.
Composite Score		7	

<div align="center">

Table 15 – Maintain Status Quo Solution Evaluation

</div>

4.7.4   Assessment

Maintaining the Status Quo was deemed to have a high amount of impact on trading partners, involve a high level of integration effort, have a high cost due to the manual efforts required to fix issues with trading partner identifiers and gather information for reporting and analysis purposes, have a high amount of risk to the integrity of the program, and will not achieve the business objectives and program goals of the RID. Taking all of this into consideration, the Maintaining Status Quo was determined not to be a viable option.

5   Recommendation

The selection of an implementation option was accomplished via an analysis of the current state trading partner identifier environment, discussions with FSA personnel, and the creation and application of evaluation criteria to each of the potential options.

Since the RID is to become the enterprise manner in which trading partner entities are recognized, it needs to be assigned in conjunction with those entities being recognized in FSA systems. In addition, the selected solution must be flexible in its definition and application of business rules governing the assignment and maintenance of RIDs. The solution must meet the stated functional requirements to ensure the business objectives and program goals are achieved. The solution's flexibility will ultimately decide how it will weather the potential changes brought on by internal evolutions or external forces (e.g., regulatory, industry, etc.).
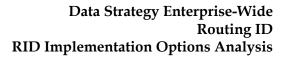
By scoring each implementation option in each of the five criteria, a composite score for each implementation option was produced and compared to the other options. The following table provides the detailed and composite scores for each of the seven implementation options and how they rank against one another. Higher scores indicate a preference over options with lower scores.

Option	Trading Partner Impact	Integration Effort	Cost	Risk and Complexity	Program Goal Achievement	
Weight	**1**	**1**	**1**	**2**	**2**	**Composite Score**
COD Based Solution	3	3	2	1	3	16
Stand-alone Solution	2	1	1	1	2	10
IPM Based Solution	**3**	**2**	**3**	**2**	**3**	**18**
Two Phased IPM Based Solution	3	1	2	1	3	14
Stand-alone Enrollment and Access Management Based Solution	2	1	1	1	1	8
Participation Management Based Solution	2	2	2	1	2	12
Maintain Status Quo	1	1	1*	1*	1	7

Table 16 – Implementation Options Analysis

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* Please refer to the detailed evaluation criteria descriptions on page 16 for information on how the Cost and Risk and Complexity criteria were scored for the Maintain Status Quo option.

As seen in the previous table, the implementation option that received the highest composite score is the IPM Based Solution. This is the recommend solution. Incorporating the RID functionality into the IPM solution allows the first system in the processing life cycle to capture and maintain the trading partner's RID.

Incorporating RID into IPM also helps FSA achieve most of its strategic objectives including:

- Integrate FSA systems and provide new technology solutions
- Improve program integrity
- Reduce program administrative costs
- Improve human capital management

Furthermore, the implementation of IPM will aid in the reduction of FSA's high-risk status through the tight integration of data that relates to school oversight and trading partner data access. By giving FSA tools such as RID, FSA will be able to develop a more effective and flexible stakeholder oversight and assistance capability.

6   Next Steps

On the acceptance of the recommended RID implementation option, Integration Partner will continue the Definition Phase of the Solution Life Cycle by creating a High-Level Design for the chosen RID implementation option. The timetable for this work will be from July through mid-November, 2003. At the completion of this phase, the chosen solution will be defined to an extent that additional business case justification may be created for entering the Construction Phase.

Appendix A: Current State of Trading Partner Identifiers

Refer to the Appendix_A_Current_State_Trading_Partner_Identifiers.doc file.

Appendix B: Routing ID Working Session Meeting Minutes

Refer to the Appendix_B_5_19_PEPS_Interview.doc file.

Refer to the Appendix_B_5_20_DLSS_Interview.doc file.

Refer to the Appendix_B_5_21_EZ_Audit_Interview.doc file.

Refer to the Appendix_B_5_21_COD_Interview.doc file.

Refer to the Appendix_B_5_21_NSLDS_Interview.doc file.

Refer to the Appendix_B_5_22_CPS_Interview.doc file.

Refer to the Appendix_B_5_22_FMS_Financial_Partners_Interview.doc file.

Refer to the Appendix_B_5_28_eCB_Interview.doc file.

Refer to the Appendix_B_5_28_Schools_Portal_Interview.doc file.

Refer to the Appendix_B_5_29_DMCS_Finanacial_Partners_Interview.doc file.

Refer to the Appendix_B_5_30_DLCS_Interview.doc file.

Refer to the Appendix_B_6_02_PM_Meeting.doc file.

Refer to the Appendix_B_6_03_EZ_Audit_Meeting.doc file.

Refer to the Appendix_B_6_03_COD_Meeting.doc file.

Refer to the Appendix_B_6_04_PEPS_Meeting.doc file.

Refer to the Appendix_B_6_04_FMS_Financial_Partners_Follow-up_Interview.doc file.

Refer to the Appendix_B_6_06_LEAP-SLEAP_Interview.doc file.